

Model CDP Square Plaque Diffuser



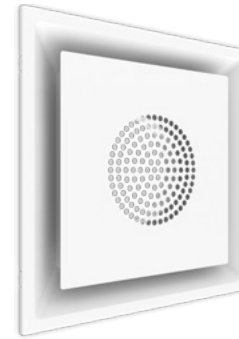
SQUARE PLAQUE DIFFUSERS

Square cone diffusers are the most popular and efficient of the ceiling diffuser family. The square cone diffuser provides a true 360 radial horizontal airflow pattern.

Model CDP is a round neck square plaque faced diffuser that provides a 360 degree discharge air pattern, available with optional round plaque, theater, high induction, or low flow cores and factory-mounted damper and optional air pattern blank-offs.



MODEL CDP



MODEL CDP-T

CEILING PLAQUE DIFFUSER MODEL NOMENCLATURE

Base Model	Core Type	Material	Border Type	Neck Size	Module Size	Finish Color	Damper
CDP	HI	S	6	10	24	01	BDS
	Blank = Standard Core RP = Round Plaque T = Theater Plaque HI = High Induction Core LF = Low Flow Core	S = Steel AL = Aluminum	-6 = T-Bar Lay in -1 = Flush Surface Mount -6P = T-Bar Lay (Panel) -7 = Concealed Spline Module -9 = Bolt Slot / Donn Fineline Module	Diameter of the inlet collar	Nominal overall diffuser size	01 = White 02 = Satin Silver 03 = Black 28 = Custom Color	None = No Damper RSD = Radial Shutter BDS = Butterfly Damper

OPTIONS AND ACCESSORIES

Equalizing Grid G3 - Round Equalizing Grid

Fiberglass Backpan FBGP - Fiberglass Backpan (24x24 module size)
EI - 1/2" External Fiberglass Insulation (12x12 module size)

Baffles BO-1 One Blank-Off, BO-2 Two Blank-Offs, BO-3 Three Blank-Offs

Earthquake Straps EQS - Earthquake Strap

Plaster Frame TBPF - T-Bar Plaster Frame

Beaded Collar Standard Inlet Collar
2"BC - 2" Beaded Inlet Collar

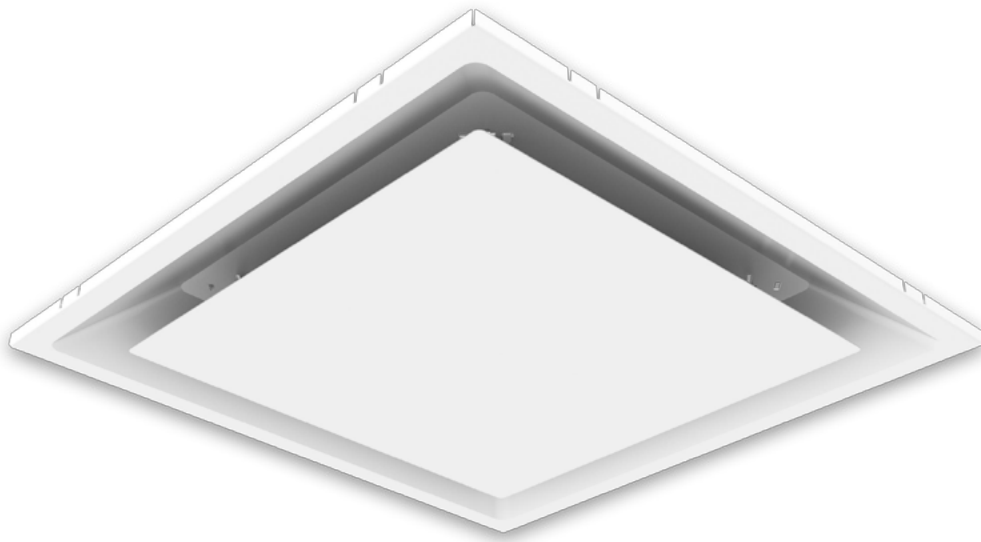
MRI Construction MRI - MRI Ready Construction



CDP-WEB PAGE



CDP SUBMITTAL



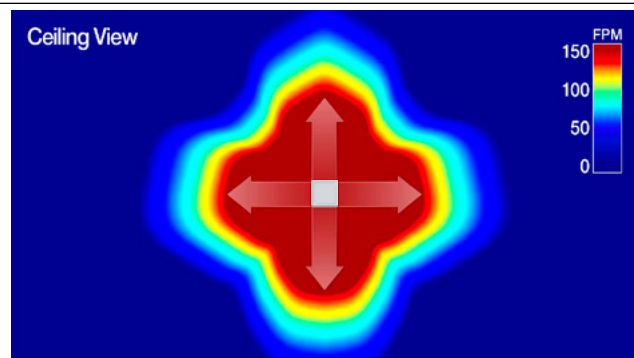
Product Features:

- Plaque Ceiling Diffuser
- 360 Degree throw pattern
- Architectural design with pleasing aesthetic
- Excellent pressure and noise performance
- Available in steel and aluminum
- Fit multiple t-bar grid modules
- Available Neck Sizes: 6, 8, 10, 12, 14 and 15 inch
- Unique border styles available for various applications

Finishes

- | | | |
|-------------------------|--|--|
| 01 - White ¹ | 03 - Black | ¹ White Finish is suitable for a primer coat if field painting is required. |
| 02 - Satin Silver | 28 - Wood Grain * | |
| 28 - Custom Color | * Wood Grain Finish Available on Request | |

CFD Throw Pattern Visualization



Optional Accessories:

- | | |
|--|-------------------------------|
| | BDS - Butterfly Damper |
| | RSD - Radial Shutter Damper |
| | G3 - Equalizing Grid |
| | BO - Blank-Off |
| | TBPF - T-Bar Plaster Frame |
| | EQS - Earthquake Straps |
| | FGBP - Fiberglass Backpan |
| | 2"BC - 2" Beaded Inlet Collar |



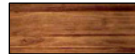
CDP-RP SUBMITTAL



Product Features:

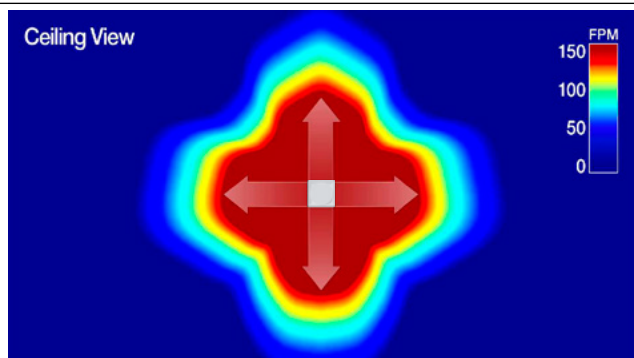
- Round Plaque Ceiling Diffuser
- 360 Degree throw pattern
- Round Plaque enables a unique design for architectural applications
- Excellent pressure and noise performance
- Available in steel and aluminum
- Fit multiple t-bar grid modules
- Available Neck Sizes: 6, 8, 10, 12, 14 and 15 inch
- Unique border styles available for various applications

Finishes

- | | |
|---|---|
| 01 - White ¹ | 03 - Black |
|  |  |
| 02 - Satin Silver | 28 - Wood Grain * |
|  |  |
| 28 - Custom Color | * Wood Grain Finish Available on Request |
|  | |

¹ White Finish is suitable for a primer coat if field painting is required.

CFD Throw Pattern Visualization



Optional Accessories:

- | | |
|---|-------------------------------|
|  | BDS - Butterfly Damper |
|  | RSD - Radial Shutter Damper |
|  | G3 - Equalizing Grid |
|  | BO - Blank-Off |
|  | TBPF - T-Bar Plaster Frame |
|  | EQS - Earthquake Straps |
|  | FGBP - Fiberglass Backpan |
|  | 2"BC - 2" Beaded Inlet Collar |



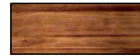
CDP-T SUBMITTAL



Product Features:

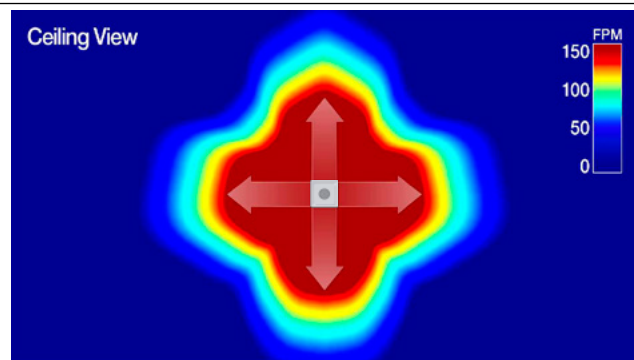
- Theater Plaque Ceiling Diffuser
- 360 Degree throw pattern
- Theater diffuser incorporates holes in the plaque face to enable vertical airflow
- Excellent pressure and noise performance
- Available in steel and aluminum
- Fit multiple t-bar grid modules
- Available Neck Sizes: 6, 8, 10, 12, 14 and 15 inch
- Unique border styles available for various applications

Finishes

- | | |
|---|---|
| 01 - White ¹ | 03 - Black |
|  |  |
| 02 - Satin Silver | 28 - Wood Grain * |
|  |  |
| 28 - Custom Color | * Wood Grain Finish Available on Request |
|  | |

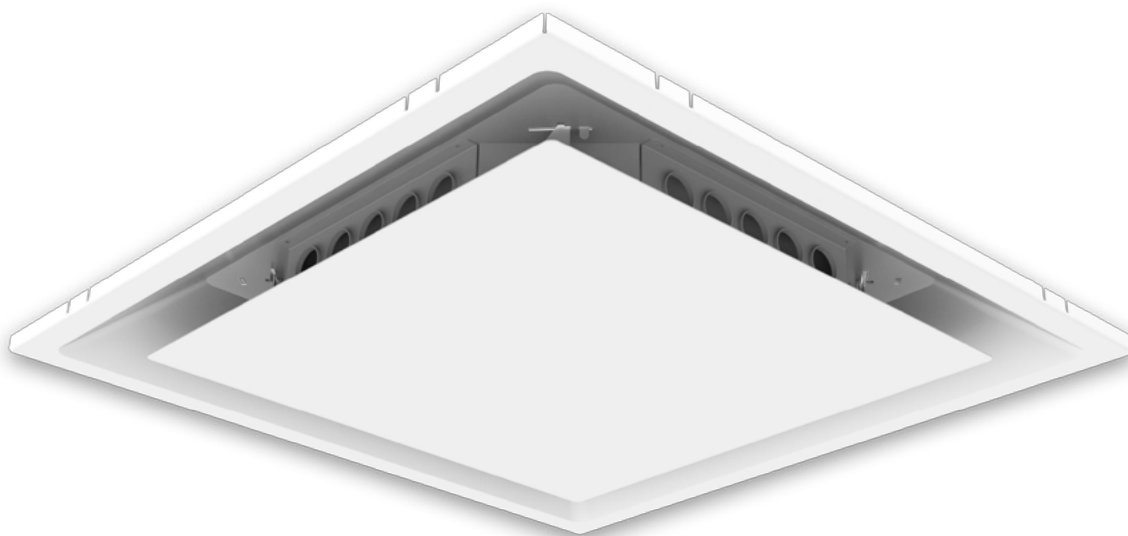
¹ White Finish is suitable for a primer coat if field painting is required.

CFD Throw Pattern Visualization



Optional Accessories:

- | | |
|---|-------------------------------|
|  | BDS - Butterfly Damper |
|  | RSD - Radial Shutter Damper |
|  | G3 - Equalizing Grid |
|  | BO - Blank-Off |
|  | TBPF - T-Bar Plaster Frame |
|  | EQS - Earthquake Straps |
|  | FGBP - Fiberglass Backpan |
|  | 2"BC - 2" Beaded Inlet Collar |



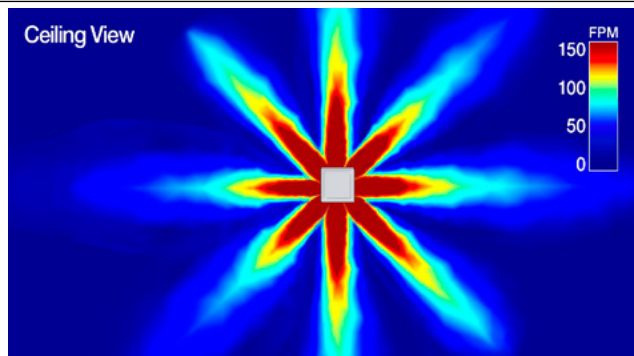
Product Features:

- High Induction Core Ceiling Diffuser
- 360 Degree throw pattern
- High Induction core greatly increases mixing efficiency
- Excellent pressure and noise performance
- Available in steel and aluminum
- Fit multiple t-bar grid modules
- Available Neck Sizes: 6, 8, 10, 12, 14 and 15 inch
- Unique border styles available for various applications

Finishes

- | | | |
|-------------------------|--|--|
| 01 - White ¹ | 03 - Black | ¹ White Finish is suitable for a primer coat if field painting is required. |
| 02 - Satin Silver | 28 - Wood Grain * | |
| 28 - Custom Color | * Wood Grain Finish Available on Request | |

CFD Throw Pattern Visualization



Optional Accessories:

- | | |
|--|-------------------------------|
| | BDS - Butterfly Damper |
| | RSD - Radial Shutter Damper |
| | G3 - Equalizing Grid |
| | BO - Blank-Off |
| | TBPF - T-Bar Plaster Frame |
| | EQS - Earthquake Straps |
| | FGBP - Fiberglass Backpan |
| | 2"BC - 2" Beaded Inlet Collar |



CDP-LF SUBMITTAL



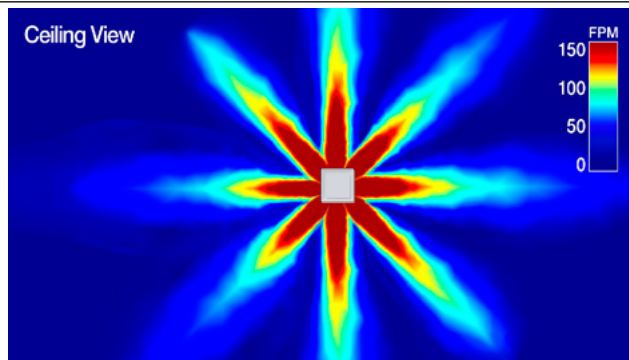
Product Features:

- Low Flow Core Ceiling Diffuser
- 360 Degree throw pattern
- Low flow core enables greater throws at lower airflow rates
- Excellent pressure and noise performance
- Available in steel and aluminum
- Fit multiple t-bar grid modules
- Available Neck Sizes: 6, 8, 10, 12, 14 and 15 inch
- Unique border styles available for various applications

Finishes

- | | | |
|-------------------------|--|--|
| 01 - White ¹ | 03 - Black | ¹ White Finish is suitable for a primer coat if field painting is required. |
| 02 - Satin Silver | 28 - Wood Grain * | |
| 28 - Custom Color | * Wood Grain Finish Available on Request | |

CFD Throw Pattern Visualization



Optional Accessories:

- | | |
|--|-------------------------------|
| | BDS - Butterfly Damper |
| | RSD - Radial Shutter Damper |
| | G3 - Equalizing Grid |
| | BO - Blank-Off |
| | TBPF - T-Bar Plaster Frame |
| | EQS - Earthquake Straps |
| | FGBP - Fiberglass Backpan |
| | 2"BC - 2" Beaded Inlet Collar |

Ceiling Diffuser Plaque - MODEL CDP

Listed Size	Neck Size	fpm Vn	400	500	600	700	800	900	1000	1200	1400	1600
		Pv	0.01	0.016	0.022	0.031	0.04	0.05	0.062	0.09	0.122	0.249
12 x 12	6	CFM	80	100	120	135	155	175	195	235	275	315
		Ps	.009	.014	.021	.024	.032	.041	.051	.075	.104	.137
		Pt	.019	.030	.043	.054	.072	.092	.114	.165	.226	.297
		Throw*	3-4-7	3-5-7	4-6-8	4-6-9	5-6-9	6-7-10	6-7-10	6-8-11	7-9-12	8-9-13
		Throw	3-4-7	4-5-7	4-6-8	5-6-9	5-7-9	6-7-10	6-7-10	7-8-11	7-9-12	8-9-13
		NC	<15	<15	<15	16	18	21	23	27	31	34
	8	CFM	140	175	210	245	280	315	350	420	490	560
		Ps	.017	.027	.039	.053	.069	.087	.108	.155	.212	.276
		Pt	.027	.043	.061	.083	.109	.138	.170	.245	.334	.436
		Throw*	3-5-9	4-7-10	5-8-11	6-8-11	7-9-12	8-9-13	8-10-14	9-11-15	9-11-16	10-12-17
		Throw	4-6-9	5-7-10	6-8-11	7-8-12	7-9-13	8-9-13	8-10-14	9-11-15	10-12-17	10-13-18
		NC	<15	<15	17	20	22	25	27	31	34	37
20x20	6	CFM	80	100	120	135	155	175	195	235	275	315
		Ps	0.006	0.009	0.014	0.015	0.020	0.026	0.033	0.048	0.067	0.088
		Pt	0.016	0.025	0.037	0.045	0.060	0.076	0.095	0.137	0.189	0.247
		Throw*	1-2-5	2-3-6	2-4-8	2-5-8	3-5-9	3-6-10	5-6-10	5-8-11	6-9-12	7-9-13
		Throw	1-2-6	2-3-7	2-4-9	2-5-9	3-5-10	3-6-11	5-7-11	5-9-12	6-9-13	7-9-14
		NC	<15	<15	<15	<15	17	20	22	27	31	35
	8	CFM	140	175	210	245	280	315	350	420	490	560
		Ps	0.012	0.020	0.028	0.038	0.050	0.063	0.078	0.111	0.152	0.198
		Pt	0.022	0.035	0.050	0.068	0.090	0.113	0.140	0.201	0.274	0.358
		Throw*	2-4-7	2-5-8	3-6-10	4-6-11	5-8-12	5-8-13	6-8-14	7-10-15	8-10-15	9-11-17
		Throw	2-4-8	2-4-9	3-7-11	4-6-12	5-8-13	5-8-14	6-8-15	7-11-16	8-11-16	9-11-18
		NC	<15	<15	<15	19	22	25	28	33	37	40
	10	CFM	220	275	325	380	435	490	545	655	765	875
		Ps	0.016	0.025	0.036	0.049	0.064	0.081	0.101	0.144	0.197	0.257
		Pt	0.026	0.040	0.058	0.079	0.104	0.131	0.164	0.234	0.320	0.417
		Throw*	3-5-9	3-6-9	4-7-12	4-7-13	7-9-14	6-9-15	8-10-15	9-12-17	10-12-18	11-13-20
		Throw	3-6-11	3-7-11	4-7-13	4-7-14	7-9-15	6-9-17	8-11-16	9-13-18	10-13-19	11-13-22
		NC	<15	<15	<15	22	25	30	32	38	43	43

See end of section for performance notes

Ceiling Diffuser Plaque - MODEL CDP

Listed Size	Neck Size	fpm Vn	400	500	600	700	800	900	1000	1200	1400	1600
		Pv	0.01	0.016	0.022	0.031	0.04	0.05	0.062	0.09	0.122	0.249
24 x 24	6	CFM	80	100	120	135	155	175	195	235	275	315
		Ps	.003	.004	.006	.006	.008	.011	.014	.021	.029	.039
		Pt	.013	.020	.029	.036	.048	.061	.076	.110	.151	.198
		Throw*	0-1-4	1-2-6	1-2-7	1-3-8	2-4-8	2-5-9	3-5-9	4-7-10	5-8-11	6-9-12
		Throw	1-2-5	1-3-6	2-4-7	2-4-8	3-5-9	4-5-9	4-6-10	5-7-11	6-8-12	6-9-13
		NC	<15	<15	<15	<15	15	18	21	26	31	35
	8	CFM	140	175	210	245	280	315	350	420	490	560
		Ps	.007	.012	.017	.023	.030	.038	.047	.067	.091	.119
		Pt	.017	.027	.039	.053	.070	.088	.109	.157	.213	.279
		Throw*	1-1-6	1-2-7	1-3-9	2-4-10	3-6-11	3-7-12	4-7-13	6-9-14	7-10-15	8-11-16
		Throw	1-2-6	2-4-8	2-5-10	3-6-11	4-6-12	5-7-13	5-8-13	6-10-14	7-11-16	9-12-17
		NC	<15	<15	<15	17	21	25	28	34	39	42
	10	CFM	220	275	325	380	435	490	545	655	765	875
		Ps	.016	.025	.034	.047	.061	.078	.096	.139	.190	.249
		Pt	.026	.040	.056	.077	.101	.128	.159	.229	.313	.409
		Throw*	1-2-7	1-3-9	2-4-11	2-5-13	3-7-14	4-8-15	5-9-16	7-11-17	9-13-19	10-14-20
		Throw	1-3-8	2-5-10	3-6-12	4-7-14	5-8-15	6-9-16	7-10-17	8-12-18	9-14-20	11-15-21
		NC	<15	15	15	21	26	30	33	37	41	43
	12	CFM	315	395	470	550	630	705	785	940	1100	1255
		Ps	.027	.042	.059	.081	.107	.133	.165	.236	.324	.422
		Pt	.037	.058	.082	.112	.146	.183	.227	.326	.446	.581
		Throw*	1-2-9	1-3-11	2-5-13	3-7-15	4-9-17	5-10-18	6-11-19	8-13-21	10-15-23	12-17-24
		Throw	2-4-10	2-6-12	4-7-14	5-8-17	6-10-18	7-11-19	8-12-20	10-14-22	11-17-23	13-18-25
		NC	<15	<15	17	22	27	30	33	38	42	45
	14	CFM	430	535	640	750	855	960	1070	1285	1495	1710
		Ps	.031	.049	.069	.095	.124	.156	.194	.280	.378	.495
		Pt	.041	.064	.092	.126	.164	.206	.256	.370	.501	.655
		Throw*	1-3-10	2-4-13	2-6-15	3-8-18	4-10-20	6-12-21	7-13-22	10-15-24	12-18-26	14-20-28
		Throw	2-4-11	3-6-14	4-8-17	6-10-19	7-11-21	8-13-22	9-14-23	11-17-25	13-19-27	15-21-29
		NC	<15	<15	20	25	30	33	36	40	43	46
	15	CFM	490	615	735	860	980	1105	1225	1475	1720	1965
		Ps	.038	.060	.086	.117	.152	.194	.238	.345	.469	.613
		Pt	.048	.076	.108	.148	.192	.244	.300	.435	.592	.772
		Throw*	1-3-11	2-4-14	3-6-16	4-8-19	5-11-21	6-12-23	7-14-24	11-17-26	13-19-28	15-21-30
		Throw	2-4-12	3-7-15	4-9-18	6-10-21	8-12-22	9-13-24	10-15-25	12-18-27	14-21-29	16-22-31
		NC	<15	<15	20	27	32	35	37	41	44	47

See end of section for performance notes

Ceiling Diffuser Plaque Round Plaque - MODEL CDP-RP

Listed Size	Neck Size	fpm Vn	400	500	600	700	800	900	1000
		Pv	0.01	0.016	0.022	0.031	0.04	0.05	0.062
24 x 24	6	CFM	80	100	120	135	155	175	195
		Ps	0.005	0.006	0.011	0.016	0.022	0.024	0.026
		Pt	0.015	0.022	0.034	0.045	0.061	0.074	0.087
		Throw*	0-0-2	1-2-2	0-2-2	1-2-4	3-5-9	3-6-9	4-6-10
		Throw	0-1-1	0-2-2	1-2-3	2-3-5	3-5-9	4-5-9	4-7-10
		NC	<15	<15	<15	21	22	24	24
	8	CFM	140	175	210	245	280	315	350
		Ps	0.012	0.020	0.029	0.041	0.052	0.066	0.079
		Pt	0.022	0.035	0.052	0.072	0.092	0.117	0.142
		Throw*	1-1-3	1-3-5	2-3-5	2-3-7	4-6-9	4-7-11	5-8-12
		Throw	1-2-3	1-4-4	2-4-5	3-4-8	4-7-9	4-7-11	5-9-13
		NC	<15	<15	19	22	25	25	28
	10	CFM	220	275	325	380	435	490	545
		Ps	0.022	0.038	0.053	0.072	0.09	0.118	0.146
		Pt	0.032	0.054	0.075	0.102	0.130	0.168	0.208
		Throw*	1-2-4	1-4-8	2-5-8	3-6-10	4-6-12	4-7-13	5-8-14
		Throw	1-2-5	1-5-8	3-6-9	4-6-12	5-7-13	4-8-15	5-9-16
		NC	<15	15	24	26	28	33	35
	12	CFM	315	395	470	550	630	705	785
		Ps	0.045	0.071	0.096	0.122	0.173	0.135	0.269
		Pt	0.055	0.087	0.118	0.153	0.213	0.185	0.331
		Throw*	3-5-7	4-6-10	5-8-12	4-6-12	6-10-14	9-11-14	8-14-17
		Throw	3-6-8	5-7-11	6-9-12	6-7-14	7-12-15	9-12-15	9-15-18
		NC	<15	17	20	22	34	38	40
	14	CFM	430	535	640	750	855	960	1070
		Ps	0.073	0.110	0.146	0.181	0.269	0.155	0.415
		Pt	0.083	0.125	0.169	0.212	0.309	0.205	0.478
		Throw*	4-6-7	5-7-11	5-7-12	6-7-13	7-11-15	10-11-15	8-15-19
		Throw	4-7-8	6-8-11	7-10-13	6-8-14	9-12-15	11-15-18	9-15-21
		NC	16	18	21	23	35	39	41
	15	CFM	490	615	735	860	980	1105	1225
		Ps	0.087	0.132	0.175	0.213	0.322	0.167	0.495
		Pt	0.097	0.147	0.197	0.244	0.362	0.217	0.557
		Throw*	4-6-8	5-7-11	6-7-13	6-8-14	8-12-15	10-12-16	10-16-21
		Throw	5-6-8	6-8-13	8-10-14	7-9-15	10-13-16	11-13-17	11-17-22
		NC	17	19	22	24	36	40	42
	14	CFM	430	535	640	750	855	960	1070
		Ps	0.073	0.110	0.146	0.181	0.269	0.155	0.415
		Pt	0.083	0.125	0.169	0.212	0.309	0.205	0.478
		Throw*	4-6-7	5-7-11	5-7-12	6-7-13	7-11-15	10-11-15	8-15-19
		Throw	4-7-8	6-8-11	7-10-13	6-8-14	9-12-15	11-15-18	9-15-21
		NC	16	18	21	23	35	39	41
	15	CFM	490	615	735	860	980	1105	1225
		Ps	0.087	0.132	0.175	0.213	0.322	0.167	0.495
		Pt	0.097	0.147	0.197	0.244	0.362	0.217	0.557
		Throw*	4-6-8	5-7-11	6-7-13	6-8-14	8-12-15	10-12-16	10-16-21
		Throw	5-6-8	6-8-13	8-10-14	7-9-15	10-13-16	11-13-17	11-17-22
		NC	17	19	22	24	36	40	42

See end of section for performance notes

Ceiling Diffuser Plaque High Induction - MODEL CDP-HI

Listed Size	Neck Size	fpm Vn	400	500	600	700	800	900	1000	1200
		Pv	0.01	0.016	0.022	0.031	0.04	0.05	0.062	0.09
24 x 24	6	CFM	80	100	120	135	155	175	195	235
		Ps	.005	.007	.010	.010	.013	.018	.023	.035
		Throw	8	9	11	12	14	14	15	17
		NC	14	15	16	18	20	24	28	35
	8	CFM	140	175	210	245	280	315	350	420
		Ps	.012	.020	.028	.038	.050	.063	.078	.111
		Throw	9	11	14	15	16	18	18	19
		NC	16	18	20	23	28	34	38	46
	10	CFM	220	275	325	380	435	490	545	655
		Ps	.026	.041	.056	.078	.101	.129	.158	.229
		Throw	12	15	18	21	23	24	26	27
		NC	18	19	20	28	35	41	45	50
	12	CFM	315	395	470	550	630	705	785	940
		Ps	.045	.069	.097	.134	.177	.219	.272	.389
		Throw	15	18	21	26	27	29	30	33
		NC	18	20	23	30	36	41	45	51
	14	CFM	430	535	640	750	855	960	1070	1285
		Ps	.051	.081	.114	.157	.205	.257	.320	.462
		Throw	17	21	26	29	32	33	35	38
		NC	19	20	27	34	41	45	49	54
	15	CFM	490	615	735	860	980	1105	1225	1475
		Ps	.063	.099	.142	.193	.251	.320	.393	.569
		Throw	18	23	27	32	33	36	38	41
		NC	19	20	27	36	43	47	50	55

See end of section for performance notes

Ceiling Diffuser Plaque Low Flow - MODEL CDP-LF

Listed Size	Neck Size	fpm Vn	100	200	300	400	500	600	700	800
		Pv	0.04	0.06	0.08	0.01	0.016	0.022	0.031	0.04
24 x 24	6	CFM	20	40	60	80	100	120	135	155
		Ps	0.003	1	0.005	0.006	0.008	0.011	0.011	0.015
		Throw	8	9	9	10	11	13	15	17
		NC	<15	<15	<15	15	16	18	19	22
	8	CFM	35	70	105	140	175	210	245	280
		Ps	0.005	0.007	0.010	0.013	0.023	0.032	0.044	0.057
		Throw	8	9	10	11	15	19	21	23
		NC	<15	16	17	18	20	22	25	31
	10	CFM	63	116	168	220	275	325	380	435
		Ps	0.012	0.018	0.025	0.030	0.048	0.065	0.089	0.116
		Throw	11	12	13	15	19	23	27	29
		NC	<15	16	17	19	21	22	31	38
	12	CFM	84	161	239	315	395	470	550	630
		Ps	0.023	0.032	0.041	0.051	0.080	0.112	0.154	0.203
		Throw	14	15	17	19	23	27	32	34
		NC	<15	17	18	19	22	25	32	40
	14	CFM	115	220	325	430	535	640	750	855
		Ps	0.028	0.037	0.048	0.059	0.093	0.131	0.181	0.236
		Throw	16	17	19	21	27	32	36	40
		NC	17	18	20	21	22	29	37	44
	15	CFM	124	246	369	490	615	735	860	980
		Ps	0.034	0.046	0.057	0.072	0.114	0.163	0.222	0.289
		Throw	16	18	20	23	29	34	40	42
		NC	19	20	21	21	22	29	40	47

PERFORMANCE NOTES. All data is tested in accordance with ANSI/ASHRAE 70-2006.

DEFINITION OF UNITS

CFM Cubic Feet per Minute (air)

fpm Velocity of airstream in Feet per Minute

Pv Velocity pressure (inches of water column)

Pt Total pressure (inches of water column)

Ps Static pressure = Pt-Pv (inches of water column)

Throw* Non-isothermal horizontal throw (supply air temperature 15°F colder than average room temperature); values are for 150, 100 and 50 fpm velocities

Throw Isothermal throw (supply air temperature the same as average room temperature); values are for 150, 100 and 50 fpm velocities

NC Noise criterion, sound pressure level NC ratings are based on sound power level (Lw) re: 10⁻¹² watts minus a 10 dB room attenuation in all octave bands

Vn Neck Velocity